**COLLECTION OF VITAL STATISTICS IN INDIA**

**Framework**

* **Vital Events and Vital Statistics**
* **History of Civil Registration in India**
* **Sources of Vital Statistics-**

1. **Civil Registration System**
2. **Census**
3. **Sample registration system**
4. **Other Sources**

* **Uses of Vital Statistics**
* References

**Vital Events and Vital Statistics**

**What is a vital event** ?

* A person’s entry into the world (by birth) and a person’s departure from it (by death)
* Still birth/ Fetal death (demographic point of view)
* Adoption,
* legitimation,
* recognitions;
* Marriages,
* Divorces,
* Separations and annulments of marriage

**What are Vital Records** ?

* Concerned with Vital events/ recorded vital events
* Recording or registration of vital events is Vital Registration System
* In India, the civil registration system mandates registration of births, deaths and still births.
* Not all countries publish statistics on all 10 vital events recommended by the United Nations.
* **A vital statistics system** is defined as the total process of

1. collecting information by civil registration or enumeration on the frequency of occurrence of specified and defined vital events, as well as relevant characteristics of the events themselves and of the person or persons concerned, and
2. Compiling, processing, analyzing, evaluating, presenting and disseminating these data in

statistical form.

**Rationale for Collection of Vital Statistics**

* Periodic information on diverse aspects of socio-economic, health and other aspects of population is needed
* Policy making, programme implementation as well as for monitoring the programmes.
* Usefulness in making decisions in fertility and health related aspects
* Providing client centered, demand driven, and good quality services

**HISTORY OF CIVIL REGISTRATION IN INDIA**

**1866** - Central Province of Berar introduced a system of registration

**1873** - The Bengal Births and Deaths Registration Act was passed

**1880**- The Indian Famine commission pointed out the need for registration of vital events such as births and deaths. Fixed the responsibility on the Sanitary Commissioner to warn the Government of any unusual rise in the death rate

**1886** - First legislation at national level to register births, deaths and marriages (voluntary)

**1899** - Madras Registration of Births and Deaths Act

Municipal Act, Panchayat Act, Chowkidar Manual or Land Revenue Manual

* **Royal Commission on Agriculture (1924) and Royal Commission on Labour (1938**) –

The importance of vital statistics in the study of manpower and health

**1939** - The Central Advisory Board of Health strongly recommended the compulsory registration of vital events

**1948** - The second health ministers’ conference appointed a vital statistics committee.(endorsed Bhore committee‘s recommendation )

**1951** - The office of the Registrar General, India created

**1969**- The Registration of births and deaths Act

* **The Central Expert Committee of the Indian Council of Medical Research**

1. Legislation for compulsory registration of vital events,

2. appointment of the secretaries of gram Panchayat as Registrars,

3. Production of birth certificates for admission in schools

* **(1960) - Expert Committees of the States on Cholera and Small Pox and Manickavelu Committee of the Central Council of Health**

1.The setting up of statistical units in state headquarters and in large municipalities and municipal corporations

2. Provision of statistical staff at the district level and in the primary health centers for the work relating to health and vital statistics.

3. Centralized mechanical tabulation and provision of training facilities for statistical personnel on a uniform basis.

* **1960 -** Vital statistics was transferred to the office of the Registrar General, India from the Director General of Health services. Thus, population census and vital statistics, including civil registration, came under one office
* The important sources of vital statistics in India are

1. Civil Registration System;
2. Population Census

(3) Demographic Sample Surveys such as those conducted by the National Sample Surveys Organization(NSSO);

(4) Sample Registration System (SRS) and

(5)Health Surveys, such as National Family Health Surveys, (NFHS) and District Level Household Surveys (DLHS‐RCH )

conducted for assessing progress under the Reproductive and Child Health programme.

**Civil Registration System**

* According to the United Nations, civil registration is defined as the continuous permanent and compulsory recording of the occurrence of vital events, like, live births, deaths, foetal deaths, marriages, divorces as well as annulments, judicial separation, adoptions, legitimations and recognitions.
* Civil registration is performed under a law, decree or regulation so as to provide a legal basis to the records and certificates made from the system, which has got several civil uses in the personal life of individual citizens

.

* The information collected through the registration process provides very useful and important vital statistics also on a continuous basis at the national level starting from the smallest administrative unit
* Obtaining detailed vital statistics on a regular basis is one of the major functions of the Civil Registration System (CRS) in several countries of the world.
* Vital records obtained under CRS have got administrative uses in designing and implementing public health programmes and carrying out social, demographic and historical research.
* For an individual, the birth registration records provide legal proof of identity and civil status, age, nationality, dependency status etc., on which depend a wide variety of rights.
  + The office of the Registrar General of India was created in 1951 and the vital statistics department was transferred to this office from the Director of Health Services in 1960.
  + On the deliberations and recommendations of various committees, the Registration of Births and Deaths Act (1969) was enacted by Parliament to enforce uniform civil registration throughout the country.

**Civil Registration- What it records ?**

* All vital events (live birth, deaths, foetal death, marriage, divorce, annulment, judicial separation of marriage, adoption, legitimation and recognition)
* First priority should be given to setting up procedures for the registration of (a) live births and (b) deaths, followed closely by (c) foetal deaths,
* The information collected through the registration process provides very useful and important vital statistics also on a continuous basis at the national level starting from the smallest administrative unit



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| **Civil registration** | |
| ***Objectives*** | * Exhaustive registration of vital events (births, deaths) with additional particulars |
| ***Dates*** | * Started in the 19th century (1850s in some cities) * Currently running |
| ***Organization and management*** | * Office of Registrar General of India, Delhi, and various state-level bodies (department of public health, statistics, etc.) * Enumeration conducted by local officials in rural areas * Voluntary registration in urban areas (taluk office, etc.) |
| ***Sampling*** | * Registration of all births and deaths |
| ***Publication scale*** | * Data published at district/town/ state level. * Data may also be published at lower level (urban wards, taluk, etc.) in specific states * Volume: one volume per year for India. * Information at state level may be included in State reports. |
| ***Publication*** | * Paper format: *Civil registration in India* series * Electronic format: some tables may be available on various web site * Raw data: not available |
| ***Topics covered*** | * Births: sex, age of mother, etc. * Deaths: sex, age, cause of death, etc. * No data available on migration, marriage, divorce, etc. |
| ***Web resources*** | * [www.censusindia.net](http://www.censusindia.gov.in/) * More and more information available on specific State website. See for example for Delhi or Gujarat, but on the whole, it is a matter of luck. |
| ***Assessment*** | * Indispensable as the only potentially exhaustive source on births and deaths |
| ***Limitations*** | * Coverage and registration level vary from somewhat reliable to very poor * Publication delays vary from five years to ten years * Detailed cross tabulations not available |
| ***New features*** | * Major improvements in the CR system are now under way with the launching of the 2003 campaign on birth certificates (see [information](http://www.censusindia.net/results/eci18.pdf)) * Unpublished district-wise data may be available at the ORG in Delhi if you meet the right people at the right moment (avoid tea time) |

**USES OF CIVIL REGISTRATION SYSTEM**

A) **For Individuals** :

Legal proof of identity and civil status, age, nationality, dependency status etc., on which depend a wide variety of rights.

(i) Identity and family relationships for settling inheritance or insurance claims and

arranging transfer of property.

(ii) Proof of age for admission in schools, entry into services and professions, obtaining a

driving license, exercising voting rights, entering into legal contracts, inheritance claims, marriage etc.

(iii) Nationality or citizenship by birth, to obtain passport for foreign travel, qualify for voting privileges, own property

iv) Establishment of the civil status of individuals for such purposes as receipt of alimony allowances, claims for tax benefits, provision and allocation of housing or other benefits related to the marital status of a couple, and changing nationality on the basis of marriage

B) **For Administrative purposes :**

* Live birth records- basis of public health programs, PNC and MCH services,
* Death records- Legal permission for burial, need for preventive control measures

**LEGAL FRAMEWORK FOR CIVIL REGISTRATION**

* Foundation for a sound civil registration system in a country
* Comprehensive organic law that is not over‐regulated
* Custom‐designed legislation that maps out the systems, establishes their organization and defines the classes of vital events to be registered, the basic information to be gathered, and the registration requirements, as well as by whom, when and how the events are to be registered.
* Following are tabulated on basis of data collected from CRS

1. Vital Statistics by districts

2. Vital Statistics by sex

3. Vital Rates by district

4. Vital Statistics for towns with population 30000 and above

5. Number of live births by type of medical attention at delivery

6. Deaths by type of medical attention received

7. Deaths by age and sex

8. Deaths by cause(medically certified or otherwise)

9. Deaths by cause, age and sex for medically certified cases

**Reasons for Low Registration**

* Low Utility of Registration certificates
* Low Priority accorded to this work and general apathy in many States
* Lack of Coordination
* Lack of awareness about the need and importance of Registration
* Ignorance about Rules and duties / responsibilities
* Insufficient allocation of funds by the State Governments.
* Lack of stringent laws

**CENSUS**

* Population census is the total process of collecting, compiling, analyzing or otherwise disseminating demo-graphic, economic and social data pertaining, at a specific time, of all persons in a country or a well defined part of a country.
* Census provides a snapshot of the country’s population and housing at a given point of time

**1872** - First census in India conducted

**1881** - It has been under taken periodically every ten years in a synchronous manner

* The census works under the Union Home Ministry, with the Registrar General also designated as the census commissioner.
* Almost every state and union territory has a permanent Directorate of Census Operations to carry out the census work.

It’s the biggest source of comprehensive data on :

* Demography and Economic Activity
* Literacy & Education
* Housing & Household Amenities
* Urbanization
* Fertility and Mortality
* Scheduled Castes and Scheduled Tribes
* Language, Religion & Migration

**CENSUS 2011**

**PHASE I- Houselisting & Housing Census and collection of data on National Population Register**

**(April to September 2010)**

**PHASE II- Population Enumeration**

**9th to 28th February 20111st to 5th March 2011 (Revisional Round)**



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| **Census of India** | |
| ***Objectives*** | * Exhaustive survey of population and housing |
| ***Dates*** | * Started in 1871-72 * Last census: 1 March 2001 * Frequency: decennial (no interruption), usually conducted in March |
| ***Organization and management*** | * Office of Registrar General of India, Delhi and regional offices * Enumeration conducted by temporary employees (including local officials) |
| ***Sampling*** | * Operations: house numbering, house listing, population enumeration (Census), post-enumeration survey * Conducted at individual, household (and village) level. * Exhaustive |
| ***Publication scale*** | * Data now published at village/tehsil/district/town/ state level * Volume: more than one thousand volumes published every ten years (from district to country level) * Census newsletter (PDF) |
| ***Publication*** | * Paper format: volumes of the Census of India (tables, analysis, special analyses) * Old census volumes on microfiches (from 1871 to 1971) * Electronic format: many tables on CD, some tables and reports on web * Raw data: not available |
| ***Topics covered*** | * Socioeconomic and demographic characteristics (individual level) * Housing amenities, household goods (household level) * Infrastructure and land use data from other sources (village level) |
| ***Web resources*** | * [http://www.censusindia.gov.in](http://www.censusindia.gov.in/)/ (new reorganized website with tables, maps, publication list, some reports-including old ones-, etc.) * <http://www.censusindia.gov.in/maps/censusgis/Census_GIS/maps.htm> (for customized mapping) * <http://www.chaf.lib.latrobe.edu.au/dcd/default.htm> (digital version of first colonial census volumes 1871-1901) |
| ***Other sites*** | * More and more states have now their own Census websites. * Check on google for "Census + Andhra Pradesh", Himachal, Kerala, Orissa, Gujarat, West Bengal, Tamil Nadu etc. |
| ***Assessment*** | * Indispensable as the only exhaustive source on Indian population. * Most economic, social and demographic characteristics are covered |
| ***Limitations*** | * No raw data available * Limited village data available * Publication delays vary from one month to ten years |
| ***New features*** | * Tables immediately available from the web * Census maps from the web * New information included in 2001 Census (agriculture, mobility, etc.) * Permanent location number * La Trobe University has already scanned reports from 1871, 1881, 1891 and 1901 censuses |

**USES OF CENSUS**

* **Age-sex-marital status of the population**
* **Socio-economic characteristics such as literacy and education**
* **Religion of head of household; occupation and industrial classification of labour force**
* **Various household and community amenities (health facilities, post office, bank, schools etc.); and housing condition.**

* **The scheduled caste and scheduled tribe composition of households**
* **Fertility (births during the last one year and children ever born) and migration status.**

* **Effectively used to get estimates of vital rates indirectly.**
* **For example, using information on children ever born and children surviving, one can derive indirect estimates for fertility, infant and childhood mortality.**

* **Base data for projection of population, generally carried out at the state level by an expert committee constituted by Planning Commission**

**The Registration of Births & Deaths (RBD) Act 1969**

**The RBD act 1969 has 5 chapters and different sections**

* **Chapter 1 of the Act (2 sections) The first section enables different enforcement dates in different states .**

**Section 2 defines the vital events to be registered and their definition.**

* **Chapter II of the Act enables to set up the registration establishment at national and state level and has 5 sections.**

**These sections deal with the appointment of registration machinery at the national, state, district and below district level. It also specifies their duties.**

* **Chapter III of the Act is the crucial chapter that defines the responsibilities of different categories of persons for registration and has eight sections (8 to 15), lays down the registration procedures, and provides for late registration.**
* **Chapter IV of the act deals with the maintenance of the record and has 4 sections, 16 to 19. Sections 16‐17, provide for maintenance of records and issuance of certified extracts by the Registrar.**
* **Chapter V is titled miscellaneous and includes 13 sections‐20 to 32.**
* **The office of the Registrar General, India brings out annually a comprehensive statistical report entitled 'Vital Statistics of India'.**
* **One important aspect of vital statistics is the certification of cause of death. This information is very important for public health planners. A provision has been made in the RBD Act for certification by a medical practitioner who attends death.**
* **Originally, it was prescribed in the Model Rules that the required information should be furnished within 7 or 3 days respectively in respect of a birth or a death in a municipality or cantonment and within 14 or 7 days in respect of a birth or a death in any other area.**
* **Subsequently, because of the difficulties expressed by some of the States with regard to the reporting period in the urban areas, uniform reporting periods of 14 days in the case of births and 7 days in the case of deaths had been prescribed for all areas, whether rural or urban.**
* **Now this period has been made 21 days uniformly for birth and death for all areas, whether rural or urban.** 
  + **Sample Registration System (SRS)**
* The Government of India, in the late 1960s, initiated the Sample Registration System that is based on a Dual Recording System.
* In the Sample Registration System, there is a continuous enumeration of births and deaths in a sample of villages/urban blocks by a resident part‐time enumerator and then, an independent six monthly retrospective survey by a full time supervisor.
* The data obtained through these two sources are matched. The unmatched and partially matched events are re‐verified in the field to get the correct number of events.
* At present, the Sample Registration System (SRS) provides reliable annual data on fertility and mortality at the state and national levels for rural and urban areas separately
* In this survey, the sample units, villages in rural areas and urban blocks in urban areas are replaced once in ten years.

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| **Sample Registration System (SRS)** | |
| ***Objectives*** | * Sample registration of vital events (births, deaths) with additional particulars * Provides estimated vital rates to supplement defective civil registration |
| ***Dates*** | * Started in 1964-65 (pilot surveys), operational since 1970 * Currently running * Frequency: annual reports based on continuous enumeration of vital events |
| ***Organization and management*** | * Office of Registrar General of India, Delhi, and regional offices * Enumeration conducted by temporary employees (including local officials) |
| ***Sampling*** | * Conducted at individual, household (and village) level. * Sample (state level and rural/urban): 6671 units in 2000 (2235 urban units) covering 6.3 million people (1.4 in urban areas) |
| ***Publication scale*** | * Data published at state level (with rural/urban differentials) * Volume: one volume per year. * SRS bulletin (annual) * Additional volumes: special studies (life tables, compendia, etc.) |
| ***Publication*** | * Paper format: annual volume (tables, analysis) and special analyses * Electronic format: some more tables on the web * Raw data: not available |
| ***Topics covered*** | * Births: sex, age of mother, rank, etc. * Deaths: sex, age, cause of death, etc. * Medical attendance at delivery, death * special studies on SRS data (life tables, etc.) * No data available on economic status, marriage, divorce, etc. |
| ***Website*** | * [www.censusindia.net](http://www.censusindia.gov.in/) (latest information available for 2004) |
| ***Assessment*** | * Indispensable as the only dependable estimates on regional birth and deaths rates (including infant, child and maternal mortality) * Good quality of estimates (with regional and temporal variation though) * Special reports available (but alas not on the web) |
| ***Limitations*** | * Data published only at state level * No raw data available |
| ***New features*** | * Samples renewed * Data more regularly published on the Census website |

**Health Surveys**

* In the past about a decade or so, a few important sources for demographic data have emerged. These are the National Family Health Surveys (NFHS) and the District Level Household Surveys (DLHS) conducted for the evaluation of reproductive and child Health programmes.
* Three rounds of NFHS surveys have since been completed. These provide estimates inter‐alia of fertility,child mortality and a number of health parameters relating to infants and children at state level.
* They also provide information on the availability of health and family planning services to

pregnant mothers and other women in reproductive ages.

* The DLHS provide information at the district level on a number of indicators relating to child health, reproductive health problems and the quality of services available to them. Three rounds of DLHS surveys have been conducted so far. In each of the first two rounds, the survey was conducted in two phases spread over two years, wherein, under each phase of the survey, half of the districts in a state had been covered.
* However, in the third round of the DLHS survey (2007‐08), all the districts were covered in one phase.

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| **National and Family Health Surveys (NFHS)** | |
| ***Objectives*** | * Large-scale survey on reproductive health * Provides estimates on health and demographic behaviour at state level |
| ***Dates*** | * NFHS 1 in 1992-93 * NFHS 2 in 1998-99 * NFHS 3 in 2005-06 |
| ***Organization and management*** | * IIPS, Mumbai, is the coordinating agency (with USAID, ORC Macro, East-West Center) * State surveys conducted by Population Research Centres, private organizations etc. * Enumeration conducted by temporary employees after intensive training |
| ***Sampling*** | * Conducted at individual, household (and community) level. * Sample size for NFHS 2: 89199 women, 91196 households in all states |
| ***Publication scale*** | * Data published at state level (with rural/urban differentials) * Volume: one volume per state. Additional studies also available |
| ***Publication*** | * Paper format: regional and national volumes (tables, analysis) and special analyses * Electronic format: most reports available on the web (PDF format) * Raw data: available on CD (can also be downloaded from the web) |
| ***Topics covered*** | * Reproductive health: nuptiality, fertility, family planning, maternal and natal care, aids awareness, nutrition, etc. |
| ***Website*** | * [www.nfhsindia.org](http://www.nfhsindia.org)/ (all published reports) * [www.measuredhs.com/](http://www.nfhsindia.org) (access to raw data) |
| ***Assessment*** | * the major source on health and demographic behaviour at the individual and regional level. Provides more information than any other demographic survey * State reports published and available for download * Raw data available for further research |
| ***Limitations*** | * Data published only at state level (or substate units), but not available for districts or cities * Data quality varies * geographical information is still sparse |
| ***New features*** | * NFHS 2 made available in less than 2 years * NFHS 3 covers quite a lot of new ground (including aids) |

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| **Reproductive and Child Health -**  **District Level Household Survey (Rapid Household Survey )** | |
| ***Objectives*** | * District-level survey on reproductive and child health and on government services |
| ***Dates*** | * RHS 1 (DLHS 1) in 1998-99 (in two phases) * DLHS 2 in 2002-03 (in two phases) * DHLS 3 in (2007-08) |
| ***Organization and management*** | * IIPS, Mumbai, is the coordinating agency * State surveys conducted by Population Research Centres, private organizations etc. * Enumeration conducted by temporary employees after intensive training |
| ***Sampling*** | * Conducted at individual and household level. * 1000 to 1500 households per district with 474 463 women and 257 245 men interviewed |
| ***Publication scale*** | * Data published at national level with district estimates * India volume published and additional (state or district) volumes scheduled |
| ***Publication*** | * Paper format: regional and national volumes (tables, analysis) * Electronic format: a few reports are available on the web (PDF format) * Raw data: available on CD from IIPS |
| ***Topics covered*** | * Ante Natal Care (ANC) and other health services, demographic behaviour, family planning, awareness about RTI/STI and HIV/AIDS, user's satisfaction * Health Infrastructure (trained staff, equipment, etc.) |
| ***Website*** | * [http://www.rchiips.org/](http://www.rchiips.org/index.html) (new quality website that includes national reports from DLHS 1, 2 and 3 as well as regional reports). * see also: <http://mohfw.nic.in/dofw%20website/dofw.htm> which includes some of the results as well as other statistics from the department of Family Welfare. |
| ***Assessment*** | * An unique source to assess the quality of government health services * One of the largest data source on demographic change in India * Data available at district level (raw data available on request) |
| ***Limitations*** | * Quality unknown |
| ***New features*** | * Round 2 includes further dimensions (nutritional status, attitude of husbands) |

**Annual Health Survey (AHS)**

* The National Rural Health Mission (NRHM) proposes an intensive accountability framework through a three pronged process of community based monitoring, external surveys and stringent internal monitoring.
* The concept of the Annual Health Survey (AHS) arose during a meeting of the National Commission of Population held on 23rd July, 2005 under the Chairmanship of the Prime Minister, wherein it was decided that “there should be an Annual Health Survey (AHS) of all districts, which could be published/monitored and compared against bench marks”.
* This was followed up by meetings with the Planning Commission and it was decided that Ministry of Health & Family Welfare (MOHFW) will initiate follow up action for implementation of this decision.
* The Annual Health Survey (AHS) aims to prepare District Health Profile of the 284 districts in the erstwhile EAG States and Assam on an annual basis

.

* Aims to provide feedback on the impact of the schemes under NRHM in reduction of Total Fertility Rate (TFR), Infant Mortality Rate (IMR) at the district level and the Maternal Mortality Ratio (MMR) at the regional level.

**Multi Indicator Coverage Survey (2000)**

* **Gathered information on child health like birth weight of a child, feeding practices, immunization, and occurrence of fever, cough, diarrhoea, and night blindness**
* **It gives information on birth registration and living arrangements of children**
* **Has permanent staff to carry out the fieldwork.**

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| MICS-2000 (in brief) | |
| * Multiple Indicator Survey 2000 * Surveys designed by Unicef to assess the situation of children at the end of the century * Department of Women and Child Development, Ministry of Human Resources Development |
| * 2000 for all states |
| * 119305 households for India * Stratified by state and urban/rural |
| * Summary report published in November 2001 * No raw data available so far * <http://www.childinfo.org/MICS2/newreports/india/india.htm> (report) |
| * Household characteristics * School attendance, health status, nutrition, education, family planning, morbidity, registration of births |

**Use of Vital Records**

**Some common uses of vital records in vital statistics are:**

1. Preparing population estimates and projections;

2. Cohort and period studies;

3. Construction of life tables;

4. Preparing health indicators, such as infant mortality rates, neonatal mortality rates, post‐neonatal mortality rates, maternal mortality rates, etc.;

5. Starting points in retrospective epidemiological studies;

6. Public health programmes in the absence of morbidity data, or for health education;

7. Maternal and child health services for planning and evaluation;

8. Fertility data in family planning.

**Definition of Vital Events**

* Not all countries publish statistics on all 10 vital events recommended by the United Nations. Some countries do not have the need to register all 10 events, and some do not have the capacity to register or to publish them.
* As a country develops a civil registration system to support the vital statistics system, it may follow a recommended priority of vital events in organizing the registration system. In India, the civil registration system mandates registration of births, deaths and still births.
* The standard international definition of these as events and the definitions followed in India are given below

**LIVE BIRTH:**

* Live Birth is the complete expulsion or extraction from its mother of a product of

conception, irrespective of the duration of pregnancy, which after such separation, breathes or

shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or

definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the

placenta is attached; each product of such a birth is considered live‐born (all live born infants

should be registered and counted as such, irrespective of gestational age or whether alive or dead

at time of registration, and if they die at any time following birth they should also be registered

and counted as deaths).

**DEATH:**

Death is the permanent disappearance of all evidence of life at any time after live birth

has taken place (post‐natal cessation of vital functions without capability of resuscitation) (this

definition excludes foetal deaths, which are separately defined below).

**Foetal Death**

**Foetal Death** is death prior to the complete expulsion or extraction from its mother of a

product of conception, irrespective of the duration of pregnancy; the death is indicated by the

fact that after such separation, the foetus does not breathe or show any other evidence of life,

such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary

muscles (note that this definition broadly includes all terminations of pregnancy other than live births, as defined above)

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